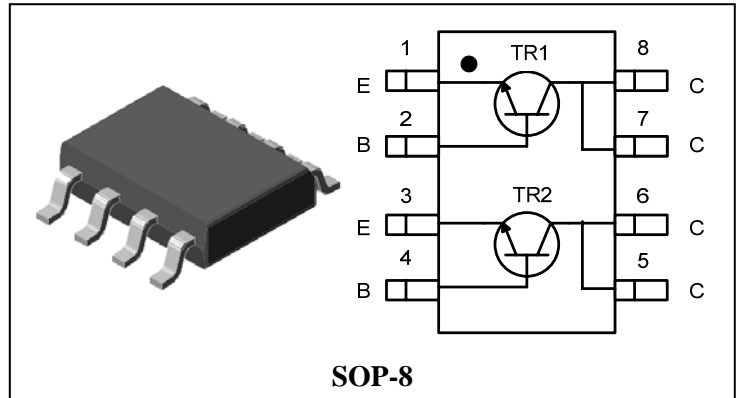


Descriptions

- General purpose amplifier
- Recommended for LED Drive Application

Features

- General Purpose application
- Low saturation: $V_{CE(sat)} = 0.5V$ Max
- 2 NPN chips in SOP-8 Package



Ordering Information

Type NO.	Marking	Package Code
SUT041	SUT041□	SOP-8

□ : Year & Week Code

Absolute maximum ratings(TR1, TR2)

($T_a = 25^\circ C$)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	45	V
Collector-Emitter voltage	V_{CEO}	40	V
Emitter-Base voltage	V_{EBO}	5	V
Collector current	I_C	1	A(DC)
	I_{CP}^*	2	A(Pulse)
Collector power dissipation	P_C^{**}	2	W/TOTAL
		1.4	W/ELEMENT
Junction temperature	T_J	150	$^\circ C$
Storage temperature	T_{stg}	-55~150	$^\circ C$

* : Single pulse, $t_p = 300 \mu s$

** : When mounted on 40x40x0.8 mm copper substrate

Electrical Characteristics(TR1, TR2)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	$I_C = 100 \mu A, I_E = 0$	45	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	$I_C = 1mA, I_B = 0$	40	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	$I_E = 10 \mu A, I_C = 0$	5	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB} = 45V, I_E = 0$	-	-	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	-	-	0.1	μA
DC current gain	$h_{FE}^{1)}$	$V_{CE} = 1V, I_C = 100mA$	160	-	320	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 50mA$	-	-	0.5	V
Transition frequency	f_T	$V_{CE} = 5V, I_C = 10mA$	-	150	-	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	-	8	-	pF

* Note 1) h_{FE} Rank : 160~320 only

Electrical Characteristic Curves(TR1, TR2)

Fig. 1 $P_C - T_a$

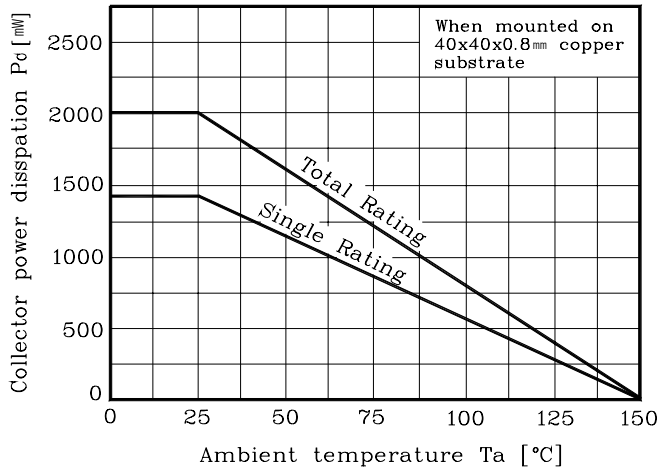


Fig. 2 $I_C - V_{BE}$

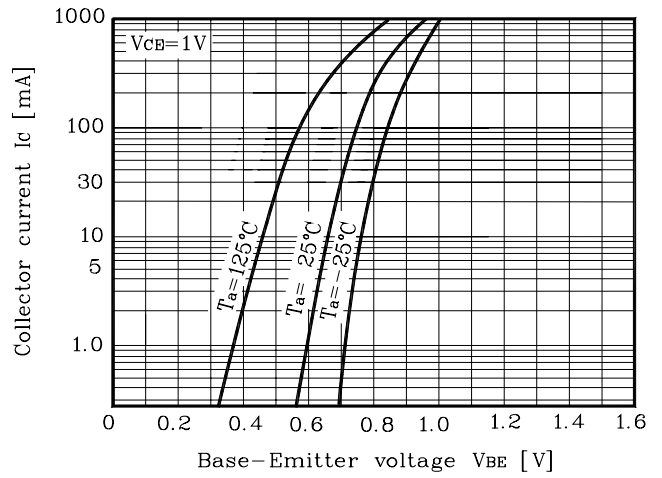


Fig. 3 $V_{CE(sat)} - I_C$

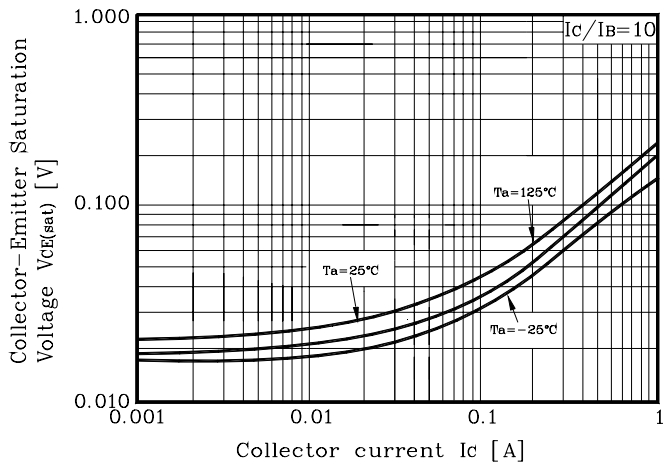


Fig. 4 $I_C - V_{CE}$

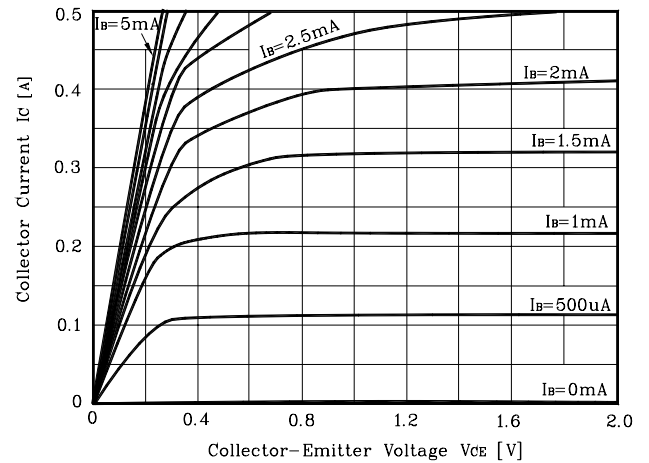


Fig. 5 $I_C - V_{CE}$

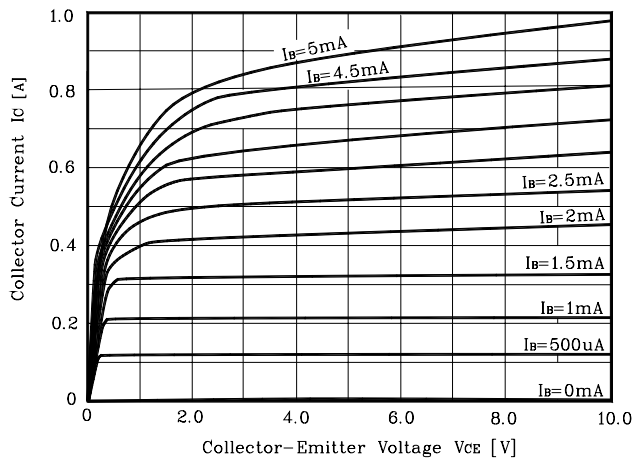


Fig. 6 $h_{FE} - I_C$

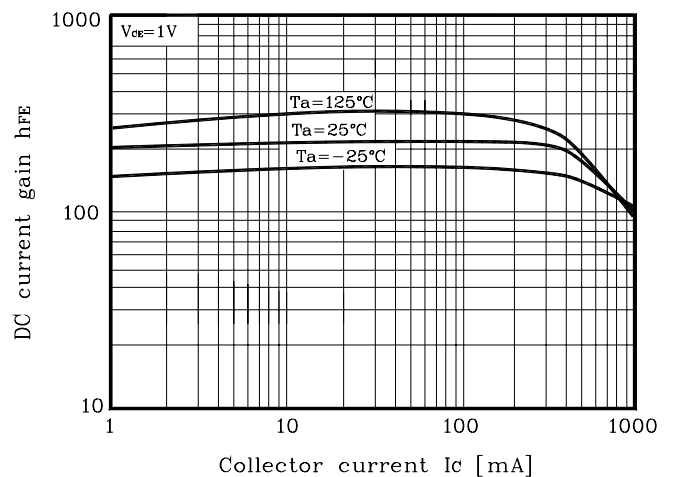


Fig. 7 $h_{FE} - I_C$

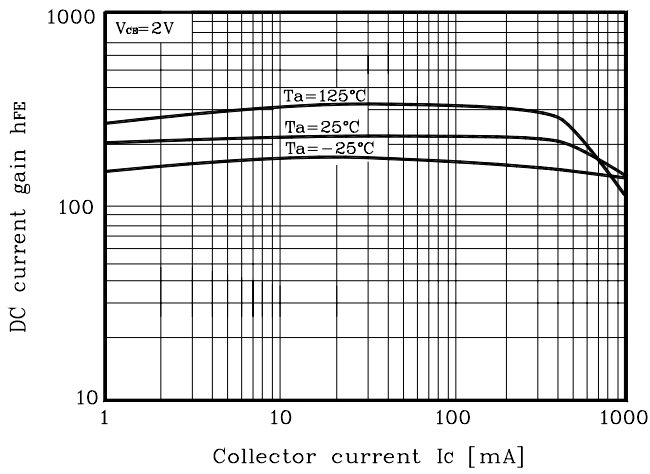


Fig. 8 $h_{FE} - I_C$

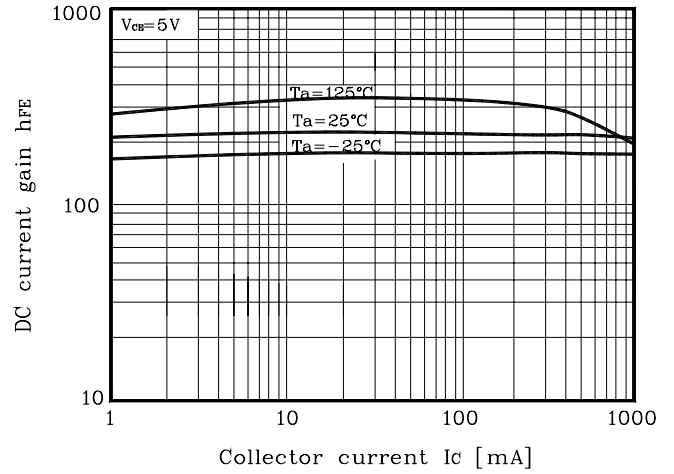


Fig. 9 $C_{ob} - V_{CB}$

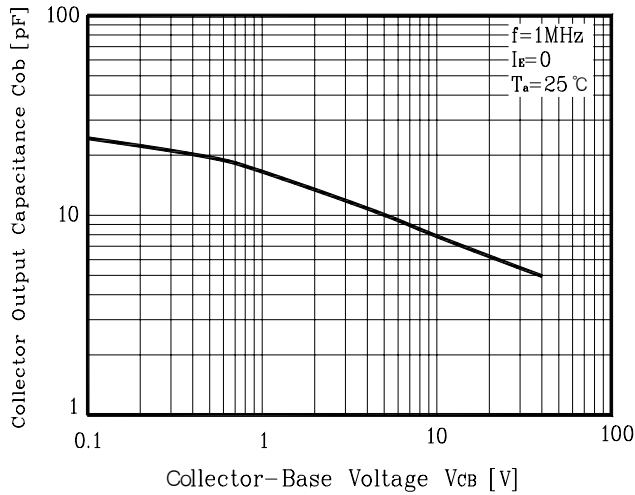
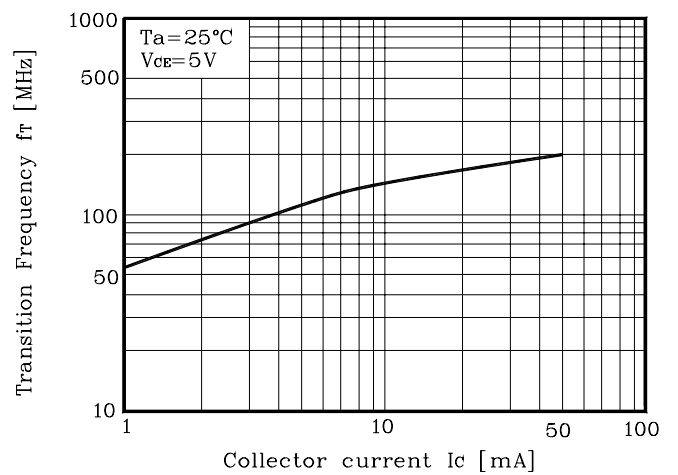
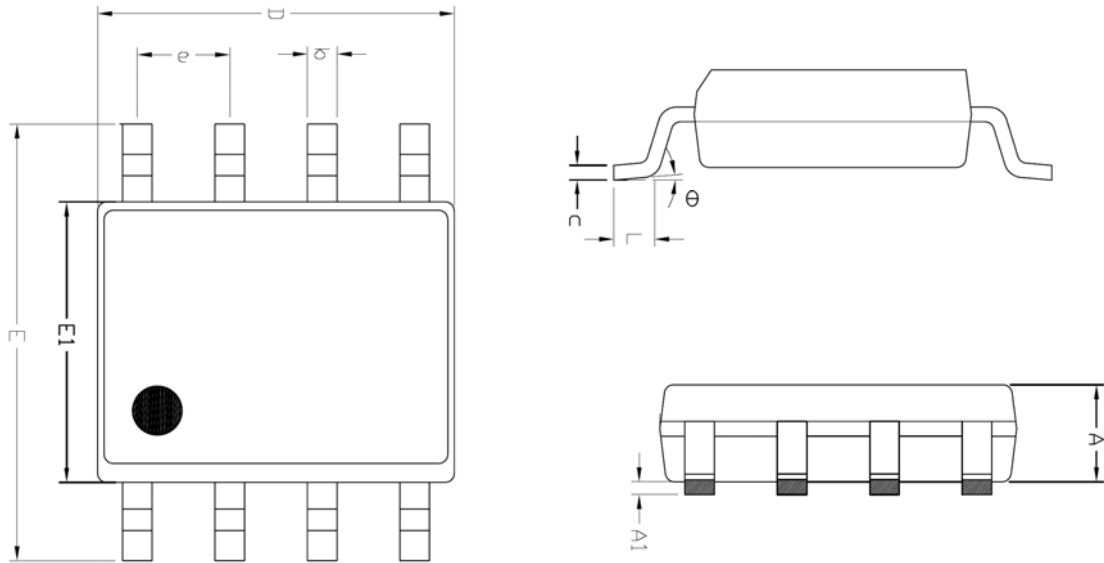


Fig. 10 $f_T - I_C$

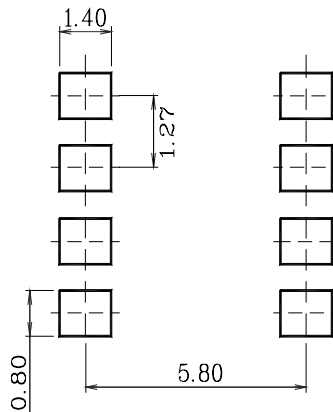


Outline Dimension



SYMBOL	MILLIMETER(mm)			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	1.245	—	1.445	
A1	0.125	0.175	0.275	
b	0.320	0.420	0.520	
c	0.170	0.220	0.270	
D	4.802	4.902	5.002	
E	5.870	6.020	6.170	
E1	3.761	3.861	3.961	
e	1.270 BSC			
L	0.462	0.562	0.662	
theta	0 °	—	8 °	

※Recommend PCB solder land [Unit: mm]



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